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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/723,008	11/26/2003	Christopher J. Cormack	42P18177	9553
59796 7590 07/13/2007 INTEL CORPORATION c/o INTELLEVATE, LLC P.O. BOX 52050 MINNEAPOLIS, MN 55402			EXAMINER DANG, HUNG Q	
			ART UNIT 2621	PAPER NUMBER
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/723,008	Applicant(s) CORMACK ET AL.	
	Examiner Hung Q. Dang	Art Unit 2621	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 November 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-24 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 26 November 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 101

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

The USPTO "Interim Guidelines for Examination of Patent Applications for Patent Subject Matter Eligibility" (Official Gazette notice of 22 November 2005), Annex IV, reads as follows:

Descriptive material can be characterized as either "functional descriptive material" or "nonfunctional descriptive material." In this context, "functional descriptive material" consists of data structures and computer programs which impart functionality when employed as a computer component. (The definition of "data structure" is "a physical or logical relationship among data elements, designed to support specific data manipulation functions." The New IEEE Standard Dictionary of Electrical and Electronics Terms 308 (5th ed. 1993).) "Nonfunctional descriptive material" includes but is not limited to music, literary works and a compilation or mere arrangement of data.

When functional descriptive material is recorded on some computer-readable medium it becomes structurally and functionally interrelated to the medium and will be statutory in most cases since use of technology permits the function of the descriptive material to be realized. Compare *In re Lowry*, 32 F.3d 1579, 1583-84, 32 USPQ2d 1031, 1035 (Fed. Cir. 1994) (claim to data structure stored on a computer readable medium that increases computer efficiency held statutory) and *Warmerdam*, 33 F.3d at 1360-61, 31 USPQ2d at 1759 (claim to computer having a specific data structure stored in memory held statutory product-by-process claim) with *Warmerdam*, 33 F.3d at 1361, 31 USPQ2d at 1760 (claim to a data structure per se held nonstatutory).

In contrast, a claimed computer-readable medium encoded with a computer program is a computer element which defines structural and functional interrelationships between the computer program and the rest of the computer which permit the computer program's functionality to be realized, and is thus statutory. See *Lowry*, 32 F.3d at 1583-84, 32 USPQ2d at 1035.

Claims 17-24 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter as follows.

Claims 17-24 define a machine-readable medium containing instructions which, when executed by a processing system, cause the processing system to perform a method. However, the claims do not define a computer-readable medium or memory and is thus non-statutory for that reason (i.e., "when functional descriptive material is

recorded on some computer-readable medium it becomes structurally and functionally interrelated to the medium and will be statutory in most cases since use of technology permits the function of the descriptive material to be realized” – Guidelines Annex IV). That is, the scope of the present claim can range from paper on which the program is written, to a program simply contemplated and memorized by a person. The examiner suggests amending the claim to embody the program on “computer-readable medium encoded with instructions capable of being executed by a computer” or equivalent in order to make the claim statutory. Any amendment to the claim would be commensurate with its corresponding disclosure.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-6, 8-14, 16-22, and 24 are rejected under 35 U.S.C. 102(b) as being anticipated by Takagi et al. (US Patent 5,999,691).

Regarding claim 1, Takagi et al. disclose a method comprising: receiving a request to change to a first channel (column 15, lines 41-46); writing a media stream of the first channel to a first buffer at a first write position (column 15, lines 34-36; Fig. 6; Fig. 10); reading the media stream of the first channel from the first buffer at a first read position (column 15, lines 41-45; RP1 in Fig. 10); sending the read media stream of the first channel to a display (column 15, lines 41-51); and upon receiving a request to

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change to a second channel (column 15, lines 47-49), discontinuing the reading of the media stream of the first channel at the first read position while continuing to write the media stream of the first channel at the first write position (column 15, lines 34-36; column 16, lines 37-65; Fig. 10).

Regarding claim 2, Takagi et al. also disclose writing a media stream of the second channel to a second buffer at a second write position (column 15, lines 34-36; column 15, line 47 – column 16, line 8); reading the media stream of the second channel from the second buffer at a second read position (column 15, lines 34-36; column 15, line 47 – column 16, line 8; RP2 in Fig. 10); and sending the read media stream of the second channel to the display (column 15, line 64 – column 16, line 8).

Regarding claim 3, Takagi et al. also disclose upon receiving a request to change back to the first channel (column 16, lines 37-39), discontinuing the reading of the media stream of the second channel at the second read position while continuing to write the media stream of the second channel at the second write position (column 15, lines 34-36; column 17, lines 1-16; WP2 in Fig. 10); continue reading the media stream of the first channel at the first read position; and sending the read media stream of the first channel to the display (column 15, lines 34-36; column 16, lines 37-65; Fig. 10).

Regarding claim 4, Takagi et al. also disclose ensuring that the first read and write positions do not overlap (column 16, lines 57-60); and ensuring that the second read and write positions do not overlap (column 16, lines 1-4).

Regarding claim 5, Takagi et al. also disclose upon receiving the request to change to the first channel, determining an available tuner to assign to the media

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stream of the first channel (column 16, lines 37-39; tuner 1n, in which n is a, in Fig. 6 or Fig. 7); and upon receiving the request to change to the second channel, determining an available tuner to assign to the media stream of the second channel (column 15, lines 47-49; tuner 1n, in which n is b in Fig. 6 or Fig. 7), wherein the tuner assigned to the media stream of the first channel is different from the tuner assigned to the media stream of the second channel (tuner 1a vs. tuner 1b in Fig. 6 or Fig. 7; column 13, lines 43-58).

Regarding claim 6, Takagi et al. also disclose receiving a request to change to a third channel (column 16, lines 8-11); and making a tuner available to assign to a media stream of the third channel (column 16, lines 8-11).

Regarding claim 8, Takagi et al. also disclose the first buffer is a circular buffer (column 15, lines 34-36; Fig. 6; Fig. 7) and the second buffer is a circular buffer (column 15, lines 34-36; Fig. 6; Fig. 7).

Claim 9 is rejected for the same reason as discussed in claim 1 above in consideration that the resource manager being the "control circuit 6" and personal video recorder (PVR) being a recording path including a tuner, a compression circuit, and a ring buffer, and the playback engine being the playback path including the signal source selector, the expansion circuit, switch 5, and the CRT display unit as shown in Fig. 6 or Fig. 7.

Claim 10 is rejected for the same reason as discussed in claim 2 above in reference to the discussion of claim 9 above.

Claim 11 is rejected for the same reason as discussed in claim 3 above in reference to the discussion of claim 9 above.

Claim 12 is rejected for the same reason as discussed in claim 4 above in reference to the discussion of claim 9 above.

Claim 13 is rejected for the same reason as discussed in claim 5 above in reference to the discussion of claim 9 above.

Claim 14 is rejected for the same reason as discussed in claim 6 above in reference to the discussion of claim 9 above.

Claim 16 is rejected for the same reason as discussed in claim 8 above in reference to the discussion of claim 9 above.

Claim 17 is rejected for the same reason as discussed in claim 1 above.

Claim 18 is rejected for the same reason as discussed in claim 2 above.

Claim 19 is rejected for the same reason as discussed in claim 3 above.

Claim 20 is rejected for the same reason as discussed in claim 4 above.

Claim 21 is rejected for the same reason as discussed in claim 5 above.

Claim 22 is rejected for the same reason as discussed in claim 6 above.

Claim 24 is rejected for the same reason as discussed in claim 8 above.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 7, 15, and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Takagi et al. (US Patent 5,999,691).

Regarding claim 7, see the teachings of Takagi et al. as discussed in claim 6 above. However, Takagi et al. do not disclose a tuner is made available by assigning one of: the first tuner to the media stream of the third channel if the first channel was watched less recently by a user than the second channel and the second tuner to the media stream of the third channel if the second channel was watched less recently by the user than the first channel.

However, reusability is one of the most important criteria in designing and well known in the art. Thus, Official Notice is taken.

One of ordinary skill in the art would have been motivated to incorporate the feature of reusability to reuse the first tuner to record a another program while the second tuner is currently in use or reuse the second tuner to record another program than the second program while the first tuner is currently in use to make the Takagi's system with only two tuners (n is equal to 2) reusable. The incorporated feature would provide the apparatus that applies the Takagi's method the capability of receiving and recording many different programs using limited number of tuners.

Claim 15 is rejected for the same reason as discussed in claim 7 above.

Claim 23 is rejected for the same reason as discussed in claim 7 above.


Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hung Q. Dang whose telephone number is 571-270-1116. The examiner can normally be reached on M-Th:7:30-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thai Tran can be reached on 571-272-7382. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Hung Dang
Patent Examiner



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